but just too low to be immediately fatal. The bullet was a ·303 soft nosed split and we found afterwards had opened out and caused a large wound in its exit. The mugger rushed in the river and disappeared. A little while afterwards he appeared in the centre of the river at short intervals raising his head and neck out of the water and going down again. My shikari explained that the reason for this was that fishes were nipping at the wound in his neck and his pushing his neck out of the water was to get away from them. The shikari said the fish would probably drive him out of the water sooner or later, so we left the river for over an hour in the hope that this would happen. On returning, however, we found the mugger doing exactly the same thing, so I decided to fire, which I did. I hit him on the head, the bullet glancing off. The mugger made a great swish of water and almost jumped out. Then he lay down on the top of the water and made straight for me. I waited till he was about 3 yards from the bank and then fired between his shoulders. This instantly paralysed him and we dragged him out by the tail. We found even then he was not dead as he held on with his teeth firmly to a lathi and it took a ·303 through his brain to finish him. He was a mugger about 13 feet long.

I have never heard of a mugger after being wounded going for the firer, and should be interested to know of any one, having a similar experience.

L. STANSFIELD.

19*th February* 1924.

No. XVII.—A NOTE ON THE HABITS OF THE LARGE-SCALED EARTH SNAKE *SILYBURA MACROLEPIS*.

This little Earth Snake is very common in Mahableshwar during the rains. It is found chiefly in the rubbish heaps, drains and in the humus of the forest—more commonly at dusk, from which one gathers that it is probably crepuscular or nocturnal in habits, though I have captured one or two during the day. These snakes are most numerous after a shower of rain, which appears to draw them out of their burrows on to the roads and path ways. When alarmed or disturbed in exposed positions these snakes adopt an attitude common more or less to many snakes—they lie perfectly still with the body flattened out to the utmost extent, the object being presumably to escape detection.

The principal food of this earth snake consists of earth worms and small insects, though the former make up the bulk of its diet.

On a walk one evening I picked up one of these snakes and took it along with me. Though extremely slow in movement when on the ground, when picked up it struggled very vigorously. I saw an earth worm on the ground and put the snake down next to the worm to see whether it would attack it. To my satisfaction as soon as the snake noticed the worm it bit it, relaxing its hold immediately afterwards; as the worm continued to wriggle the snake bit it again, whereupon the worm ceased its struggles and lay quite still apparently paralyzed. It might be mentioned here that Revd. Father Caius, S. J., a bio-chemist, who is devoting a considerable amount of attention to the study of snake venoms, informs me that many of the *Silyburidae* secrete a quantity of venom in the parotid glands, which mixing with the saliva, possess sufficient virulence to enable these reptiles to easily overcome their prey. To continue with my experiment, after the worm ceased its struggles the snake commenced swallowing the worm head first. In about two minutes the whole process was complete, a great quantity of earth was forced out of the worm in the act of swallowing, much of which adhered to the mouth of the snake. This the reptile got rid of by rubbing its mouth this way and that on the ground. I picked it up after it had finished its meal, took it home and discovered later that a further quantity of mud had been ejected by the snake after I had put it away.

The natives are extremely afraid of these snakes and as usual have associated it with legendary beliefs of a most alarming character ; a woman who saw me pick one up was horror stricken at the sight and gave vent to screams which promptly brought a crowd around all shouting and gesticulating . On asking what ailed them I was told that the snake would make a knot round my hand and that I would never be able to get out of it.!

When the soil becomes dry these earth snakes burrow down into it. I am inclined to believe that they use their abbreviated tails as stoppers to close the upper ends of their burrows. The burrow it may be explained is not vertical but runs an olique course into the ground. The tail of a Silybura also ends obliquely and when the snake is buried in its burrow the upper surface of the end of the tail lies flush with the ground and thus forms an excellent stopper.

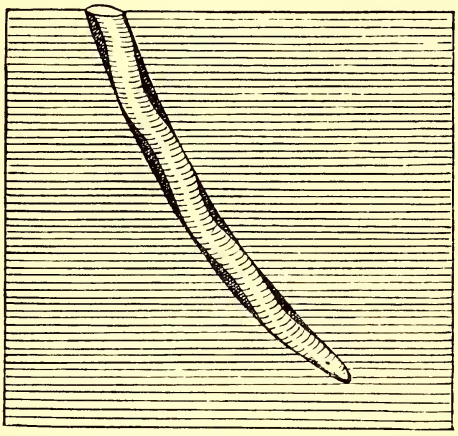

Fig 18—Diagram to illustrate method of closing burrow. The oblique end of the tail lies level with the surface of the ground.

I found one of these snakes in exactly this position and was at once struck with the possibility, that this was an explanation to the abrupt and oblique termination of the tail, which is a characteristic feature in snakes of this family. Further may it not be possible that the rough papillæ with which the ends of the tail of the Silyburids are covered, giving them a rasp like appearance, are of a sensory nature and would therefore be in the nature of an additional safeguard warning the reptile against possible intruders ? Further the end of the tail is tough and coarse—quite different to the smooth and tender texture of the rest of the body. So tender is the texture of the epidermis that these snakes appear to be unable to stand strong direct sunlight for very long. Numbers of them dug up by the road menders become scorched and perish a short time after exposure, hence the toughening of the epidermis at the end of the tail, which while the snake lies in its burrow remains continuously exposed at the surface.

In captivity they should be kept moist with damp earth and fed on earth worms, under these conditions they survive for a long period.

BOMBAY NATURAL HISTORY SOCIETY,

CHARLES McCANN.

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